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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/822,309	04/12/2004	Seung-Cheol Lee	678-1306	2605

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EXAMINER

HALIYUR, VENKATESH N

ART UNIT	PAPER NUMBER
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2419

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/822,309	Applicant(s) LEE ET AL.	
	Examiner VENKATESH HALIYUR	Art Unit 2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09/08/2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The appeal brief filed on 09/08/2008 has been considered and applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn. However, a new search was performed and a new ground(s) of rejection is made using a newly found Yamane and Versa references. Rejection follows.
2. Claims 1-12 are pending in the application.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Varsa et al [US Pat: 2004/0057446] in view of Yamane et al. [US pat: 5,784,528].

Regarding claim 1, Varsa et al in the invention of "Method for Enabling Packet Transfer Delay Compensation in Multimedia Streaming" disclosed a multimedia

reproduction apparatus (**multimedia client, item 60 of Fig 1, para 0054-0056**) using output buffering in a mobile communication terminal (**para 0005**), the apparatus comprising: a data parsing section for dividing multimedia data into video data and other data and then parsing the video data and the other data (**para 0060**); a video data processing section for decoding (**media decoder, item 90 of Fig 1**), by the frame, the parsed video data (**para 0060, lines 19-21**), which is transmitted from the data parsing section, and for buffering a predetermined number of video frames of the decoded data (**post decoder buffer, item 100 of Fig 1**); a media delay output controller (**item 110 of Fig 1**) for delaying the other data parsed by and transmitted from the data parsing section according to buffering information of the video data processing section (**para 0060, lines 21-26**), for outputting the delayed data, and for generating a synchronizing signal (**signaling message, para 0061,0069-0070**); an audio data processing section for decoding and outputting audio data from among the other data output from the media delay output controller (**para 0060, lines 13-18**); a video data output section for reading and outputting the video data buffered by the video data processing section, by the frame using control data from among the other data output from the media delay output controller (**para 0062**), Versa et al disclosed that the media decoder (**item 90 of Fig 1**) comprises separate audio and video decoders to decode audio and video streams of different standards and output to post decoder buffer (**item 100 of Fig 1**) where it is delayed temporarily before transmitting to a display/play-out device (**para 0060**) and a synchronization of audio and video streams for play-out device (**para 0069-0070**), but fails to disclose a synchronizing section for synchronizing and outputting the

video data output from the video data output section and the audio data output from the audio data processing section according to a synchronizing signal of the media delay output controller.

However, Yamane et al in the invention of "Method and an Apparatus for interleaving bit stream to record thereof on a recording medium, and reproducing the interleaved bit stream therefrom" disclosed a method decoding the media stream at a system decoder (**item 2500 of Fig 3**) and dividing the media stream in to audio stream and video streams, and buffering the streams (items 2600 and 2800 of Fig 3) and outputting the video data from the video data processing section (**video decoder, item 3800 of Fig 3**) and outputting the audio data from the audio data processing section (**audio decoder, item 3200 of Fig 3**) and synchronizing the media streams according to a synchronization timing (**synchronizer, item 2900 of Fig 3**) controlled by the controller (**decode system controller, item 2300 of Fig 3**) to delay the output of the media stream until the presentation time is elapsed (**col 11, lines 19-67, col 12, lines 1-67, col 13, lines 1-33, Fig 3**). Therefore it would have been obvious for one of ordinary skill in the art at the time the invention was made to use the method of synchronizing and outputting the video data output from the video data output section and the audio data output from the audio data processing section according to a synchronizing signal from the synchronizer of the media delay output controller as taught by Yamane et al in the system of Varsa et al to output the media streams to a display/play out device without any loss of synchronization between video and audio streams. Therefore one is motivated as such in order to decode and synchronize audio

and video data for a smooth and jitter free reproduction of the original signals received at the multimedia reproduction apparatus.

Regarding claim 2, Varsa et al disclosed that the video data processing section comprises: a video controller for outputting the parsed video data received from the data parsing section by the frame (**para 0060, lines 11-20**); a video decoder (**item 90 of Fig 1**) decoding the video data received by the frame through the video controller, by the frame; and a buffer for buffering the predetermined number of video frames of the decoded video data (**item 100 of Fig 1**), and transmitting a buffering completion signal to the video controller when the predetermined number of video frames have been buffered (**buffer control for streaming data, para 0050-0051**), the video controller transmitting buffering information to the media delay output controller according to the buffering completion signal received from the buffer (**buffer controller, para 0060-0061**).

Regarding claims 3-4, Varsa et al disclosed that the synchronizing signal of the media delay output controller is time information and the predetermined number of video frames are buffered (**rate control, para 0061-0062**), so that the video data is output by an average decoding time of the predetermined (**client parameters**) and buffered number of video frames (**para 0058**).

Regarding claims 5-7, Varsa et al disclosed wherein the multimedia data is data of a third Generation Partnership Project (3GPP) type (**3GPP, para 0003**) and is obvious that the multimedia data is modified for a third Generation Partnership Project 2

(3GPP2) and type Korea 3 Generation (K3G) type standard (**3G standards, para 0005**).

Regarding claim 8, Varsa et al disclosed that the multimedia data is data of a Real-time Transport Protocol (RTP) type (**para 0057**).

Regarding claim 9, Varsa et al disclosed a control method using output buffering to reproduce multimedia data in a mobile communication terminal (**client terminal**), the control method comprising the steps of: (1) receiving the multimedia data, dividing multimedia data into video data and other data (**audio data, para 0032-0036**), and parsing the video data and the other data, respectively, in the mobile communication terminal (**multimedia client**); (2) storing video frame start addresses of the video data parsed in step (1) (**media decoder, para 0060**), decoding the video data by the frame, and buffering a predetermined number of video frames (**size of the buffer, para 0025-0028**); (3) outputting the other data parsed in step (1) after delaying the other data as long as the predetermined number of video frames (**packets**) buffered in step (2) (**packet delay variation, para 0016**); (4) decoding and outputting audio data by the frame in which the audio data is included in the data output in step (3), and the outputting video frames buffered in step (2) according to control information included in the data output in step (3) (**para 0060, lines 13-26, para 0061**); but fails to disclose step (5) for synchronizing and outputting the video frames and audio frames output in step (4) according to time information.

However, Yamane et al disclosed a method decoding the media stream at a system decoder (**item 2500 of Fig 3**) and dividing the media stream in to audio stream

Art Unit: 2419

and video streams, and buffering the streams (items 2600 and 2800 of Fig 3) and outputting the video data from the video data processing section (**video decoder, item 3800 of Fig 3**) and outputting the audio data from the audio data processing section (**audio decoder, item 3200 of Fig 3**) and synchronizing the media streams according to a synchronization timing (**synchronizer, item 2900 of Fig 3**) controlled by the controller (**decode system controller, item 2300 of Fig 3**) to delay the output of the media stream until the presentation time is elapsed (**col 11, lines 19-67, col 12, lines 1-67, col 13, lines 1-33, Fig 3**)

Therefore it would have been obvious for one of ordinary skill in the art at the time the invention was made to use the method of outputting the video data output from the video data output section and the audio data output from the audio data processing section according to a time information from the synchronizer of the media delay output controller as taught by Yamane et al in the system of Versa et al to output the media streams to a display/play out device without any loss of synchronization between video and audio streams. Therefore one is motivated as such in order to decode and synchronize audio and video data for a smooth and jitter free reproduction of the original signals received at the multimedia reproduction apparatus.

Regarding claim 10, Versa et al disclosed that control method further comprising a step (6) of generating a buffering completion control signal when the predetermined number of video frames have been buffered in step (2) (**buffer control for streaming data, para 0050-0051**), transmitting the buffering completion control signal, and controlling the delaying process of step (3) to be performed (**stored temporarily in**

buffer until play-out time, para 0060).

Regarding claim 11, Versa et al disclosed that the predetermined number of video frames are buffered and output (**rate control, para 0061-0062**), so that the video frames are output by an average decoding time of the predetermined and buffered number of video frames (**para 0058**).

Regarding claim 12, Versa et al disclosed wherein, in step (5), when the time information of a video frame and an audio frame output in step (4) does not correspond to each other (**streaming session parameters, para 0069-0070**), a frame having prior time information waits for the other frame, from among the video frame and the audio frame, thereby performing the synchronization (**para 0062**).

Response to Arguments

5. Applicant's arguments, see appeal brief filed on 09/08/2008 have been fully considered and is persuasive. Therefore the rejection of claims communicated in previous office action has been withdrawn. However a new ground(s) of rejection has been made in view of Versa et al and a newly found Yamane et al reference.

With respect to applicant's argument for claims 1,9, that Versa et al fails to disclose media delay output controller, however the examiner respectfully disagrees and points applicant's to para 0060, lines 20-28 where Versa et al disclosed a method for delaying the decoded media data by temporarily storing it in the post decoder buffer (item 100 of Fig 1) until its scheduled play-out time arrives at the display (item 120 of

Fig 1) which is executed under the control of the buffer controller (item 110, Fig 1) and therefore Versa et al disclosed the method of controlling the media output by a controller.

With respect to applicant's argument for claims 1,9,that Varsa et al fails to teach or suggests the claimed feature of dividing multimedia data into video data and other data and then parsing the video data and the other data, and decoding the parsed video data by the frame, buffering a predetermined number of video frames, and delaying the parsed other data as many time as the video frames are buffered and outputting the delayed data, and outputting the video frames, as described in the present application, Versa et al disclosed that the media decoder (item 90 of Fig 1) comprises separate audio and video decoders to decode audio and video streams of different standards and output to post decoder buffer (item 100 of Fig 1) where it is delayed temporarily before transmitting to a display/play-out device (para 0060) and a synchronization of audio and video streams for play-out device (para 0069-0070).

However, Varsa et al fails to positively disclose the feature of a synchronizing section for synchronizing and outputting the video data output from the video data output section and the audio data output from the audio data processing section according to a synchronizing signal of the media delay output controller. In order to overcome this deficiency the examiner has used in Versa et al in view of a newly found Yamane et al reference in this office action.

Conclusion

6. Any inquiry concerning this communication or earlier communications should be directed to the attention to Venkatesh Haliyur whose phone number is 571-272-8616.

The examiner can normally be reached on Monday-Friday from 9:00AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached @ (571)-272-7884. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (571)-272-2600 or fax to 571-273-8300.

7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197(toll-free).

/Venkatesh Haliyur/

Examiner, Art Unit 2419

/Edan Orgad/

Supervisory Patent Examiner, Art Unit 2419